

**[0046]** Having thus described the invention, what is claimed is:

- 1 1. A hydrostatic multi-motor drive unit comprising:
  - 2 at least two gearless, hydraulic motors acting upon a common load;
  - 3 a closed hydraulic circuit containing said at least two hydraulic motors;
  - 4 at least one variable displacement pump in said closed hydraulic circuit
  - 5 for supplying the pressure medium to said at least two hydraulic motors;
  - 6 said at least two hydraulic motors interconnected by at least one free-
  - 7 wheel device, with one of said at least two hydraulic motors arranged after said
  - 8 freewheel device; and
  - 9 said hydraulic motor arranged after said freewheel device having a vari-
  - 10 able displacement volume.
- 1 2. The drive unit of claim 1, further including:
  - 2 at least one pressure sensor in said hydraulic circuit between said at least
  - 3 two hydraulic motors and said variable displacement pump for distinguishing
  - 4 between the operating states of accelerating or decelerating.
- 1 3. The drive unit of claim 2, further including:
  - 2 a controllable coupling interconnecting said at least two hydraulic motors
  - 3 in parallel with said freewheel device.
- 1 4. The drive unit of claim 3, wherein:
  - 2 said at least two hydraulic motors, said freewheel device, and said con-
  - 3 trollable coupling are arranging in one casing.
- 1 5. The drive unit of claim 4, further including:
  - 2 an electronic control unit connected to and managing the variables of said
  - 3 at least two hydraulic motors and said variable displacement pump.

- 1    6.    The drive unit of claim 5, wherein:
  - 2        said electronic control unit comprises a microprocessor.
- 1    7.    The drive unit of claim 1, further including:
  - 2        a controllable coupling interconnecting said at least two hydraulic motors
  - 3        in parallel with said freewheel device.
- 1    8.    The drive unit of claim 7, wherein:
  - 2        said at least two hydraulic motors, said freewheel device, and said con-
  - 3        trollable coupling are arranging in one casing.
- 1    9.    The drive unit of claim 8, further including:
  - 2        an electronic control unit connected to and managing the variables of said
  - 3        at least two hydraulic motors and said variable displacement pump.
- 1    10.   The drive unit of claim 9, wherein:
  - 2        said electronic control unit comprises a microprocessor.
- 1    11.   The drive unit of claim 10, further including:
  - 2        a controllable coupling interconnecting said at least two hydraulic motors
  - 3        in parallel with said freewheel device.
- 1    12.   A method for influencing the power and the direction of rotation of the hydrostatic multi-motor drive unit of claim 3, comprising the steps of:
  - 3        (a)    varying the displacement volume of said displacement pump;
  - 4        (b)    varying the volume of one of said at least two hydraulic motors;
  - 5        (c)    engaging or disengaging said controllable clutch to determine the
  - 6        direction of rotation of said load.

1 13. The method of claim 12, further comprising the steps of:  
2 (d) increasing the displacement volume of said displacement pump;  
3 (e) for further increases in the rotational speed, the volume of said one  
4 of said at least two hydraulic motors is reduced and, if even additional rotational  
5 speed is desired, the volume of the other said one of said at least two hydraulic  
6 is reduced.

1 14. The method of claim 13, further comprising the steps of:  
2 (f) observe said pressure sensor, and when a pressure change in said  
3 hydraulic circuit is recognized;  
4 (g) adjusting the displacement volume of said displacement pump.

1 15. A procedure in accordance with claim 6 for accelerating a multi-motor  
2 drive unit in the reverse direction, **characterized in that,**  
3 the delivery direction of the pump (5) is reversed, the displacement  
4 volume of the pump (5) is increased and to further increase the rotational speed  
5 the volume of the motor (2) is reduced.